NorthShore
University HealthSystem

DOC IN THE FIELD
A case based discussion

Stroke - Large Vessel Occlusion

There are two types of stroke (1) hemorrhagic and (2) ischemic. A critical subset of ischemic strokes is the Large Vessel Occlusion (LVO). Think of an LVO as the STEMI of chest pain calls. The following summarizes recognition, treatment, destination, and hospital response and intervention.

Recognition
• sudden onset
• one-sided weakness
• speech abnormality (typically)
• **fixed gaze** (eyes will not cross vertical midline)
• **hemineglect** (patient literally ignores one side of his body, including paramedic speaking on that side)

Hemineglect
(Ignore half of body)

Fixed Gaze
(Eyes don't cross vert)

Treatment
• protect airway
• diesel!

Destination
• Onset < 24 hours… **Comprehensive Stroke Center** (if available per SOP), but why…
  ➡ tPA works very poorly in LVO patients
  ➡ neurosurgons/neurointerventionalists available to remove clot
  ➡ specialized in-hospital staff typically not available at primary or stroke ready hospitals

Hospital Response and Intervention
• EMS notifies ECRN of inbound stroke
• In-hospital Stroke Code activation (at NorthShore 8080)
• Stroke neurologist or stroke team NP arrives at bedside (either physically or virtually)
• CAT scans including dye into the arteries and special perfusion scans to determine viable brain tissue
• If thrombectomy candidate then taken to angiography operating room… neurosurgeon removes clot

Shout Out of the Month
Deerfield/Bannockburn's **Greg Zarko** and **Clint Ludden** cared for a young female with a massive stroke. They recognized a speech deficit, one-sided weakness and her eyes not crossing the midline (fixed gaze). The large vessel occlusion (LVO) presentation led to HP bypass. Patient was brought to Evanston (CSC) where the waiting stroke team took her to emergency angiography and saved her life.

VIMEO Lectures
Dr. Ares (NorthShore neurosurgeon) - Managing LVO (https://vimeo.com/750919753)
Dr. Feinzimer (HP EMS medical director) - Stroke - The Critical Elements (https://vimeo.com/378164432)